

Study compares exercise regimens for obese older adults

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Sedentary, obese older adults appear to improve their functional abilities and reduce insulin resistance through a combination of resistance and aerobic exercises, according to a report in the January 26 issue of *Archives of Internal Medicine*.

Older adults currently comprise less than 13 percent of the U.S. population but account for about 35 percent of total personal health care costs, according to background information in the article. "Projections indicating that the U.S. population 65 years and older will increase from 12 percent in 2000 to 20 percent in 2030 underscore the urgent need to develop effective strategies designed to manage the risk factors for disease and disability and thereby improve the overall health and quality of life of older adults," the authors write.

"With respect to risk factors for disease, it is well established that aging is associated with a marked increase in insulin resistance, a primary defect that precedes serious diseases, including diabetes, stroke and coronary heart disease independent of other major cardiovascular disease risk factors," they continue. "Aging is also associated with a progressive increase in functional limitations that affect activities of daily living and quality of life and that are highly predictive of subsequent disability."

Lance E. Davidson, Ph.D., of Queen's University, Kingsland, Ontario, Canada, and Columbia University, New York, and colleagues conducted a randomized clinical trial involving 136 sedentary older adults who were abdominally obese, meaning they had a waist circumference of at least 102 centimeters (40 inches) for men or 88 centimeters (35 inches) for women. For six months, participants were randomly assigned to one of four groups: resistance exercise (one set of nine exercises, 20 minutes three times per week), aerobic exercise (30 minutes of moderate-intensity treadmill walking five times per week), combined exercise (30 minutes of aerobic exercise three

times per week plus 60 minutes of resistance training weekly) and a control group that did not exercise.

After six months, insulin resistance improved in the aerobic and combined exercise groups as compared with the control group. In addition, all exercise groups improved their functional limitation (as measured by tests such as the number of times a person could stand up out of a chair in 30 seconds or step in place in two minutes) compared with the control group. The combined exercise group showed greater improvement than the aerobic only group. Finally, cardiorespiratory fitness increased in the aerobic and combined exercise groups but not in the resistance exercise group.

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